

IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

1-11. (Canceled).

12. (Currently Amended) A modulation apparatus comprising:

a modulator that modulates a frequency converted signal by a first baseband phase signal, and generates a modulated signal;

a phase comparator that determines finds a first phase distortion between a phase of the modulated signal and a phase of a reference signal;

a voltage control oscillator that generates an oscillation frequency as a modulated output signal, the oscillation frequency being determined by a control signal indicating the first phase distortion;

a frequency converter that converts a frequency of the modulated output signal generated by in the voltage control oscillator, and generates the frequency converted signal;

a demodulator that demodulates the modulated output signal generated by in the voltage control oscillator, and generates a second baseband phase signal; and

a storage that stores a constant; and

a compensator that determines finds a second phase distortion by multiplying a magnitude of a phase change between adjacent data obtained from a subsequent first baseband phase signal that follows the first baseband phase signal, by the constant stored in the storage, compensates

the subsequent first baseband phase signal using the determined second phase distortion, and
outputs the compensated subsequent first baseband phase signal to the modulator, wherein:
performing a subtraction between the first baseband phase signal and the second baseband phase
signal, finds a constant by dividing the second phase distortion by one of a magnitude of a first
frequency change and a magnitude of a phase change between adjacent data, each magnitude
being found based on the first baseband phase signal, finds a third phase distortion by
multiplying the constant and the magnitude of the phase change between the adjacent data, and
compensates the third phase distortion with respect to the first baseband phase signal

the constant is determined by dividing a third phase distortion by one of a magnitude of a
frequency change per unit time of the first baseband phase signal and a magnitude of a phase
change between adjacent data of the first baseband phase signal; and

the third phase distortion is a difference between the first baseband phase signal and the
second baseband phase signal.

13. (Currently Amended) The modulation apparatus according to claim 12, wherein the compensator transforms the magnitude of the phase change between adjacent data obtained from
the subsequent first baseband phase signal into a magnitude of a second frequency change per
unit time of the subsequent first baseband phase signal in predetermined time, and determines the
second finds the third phase distortion using the magnitude of the second frequency change per
unit time obtained by the transformation and the constant stored in the storage.

14. (Currently Amended) The modulation apparatus according to claim 13, wherein
further comprising:

the [[a]] storage that stores the constant for a the predetermined time; and, wherein:
the compensator determines the second finds the third phase distortion by multiplying the
magnitude of the second frequency change per unit time obtained by the transformation, by and
the constant stored in the storage.

15. (Currently Amended) The modulation apparatus according to claim 13, wherein
further comprising:

the [[a]] storage stores that has a table storing phase distortion selection information that
associates the [[a]] magnitude of the [[a]] frequency change per unit time with the constant; and,
wherein:

the compensator determines the second finds the third phase distortion, by selecting the
constant by referring to the phase distortion selection information using the magnitude of the
second frequency change per unit time, and by multiplying the selected constant by and the
magnitude of the second frequency change per unit time.

16. (Canceled).

17. (Previously Presented) The modulation apparatus according to claim 12, wherein the
demodulator demodulates a received signal in addition to generating the second baseband phase
signal.

18. (Currently Amended) The modulation apparatus according to claim 12, wherein the modulator modulates a carrier signal, the carrier signal being the frequency converted signal, using the subsequent first baseband phase signal compensated by the compensator, and generates the modulated signal.

19 and 20. (Canceled).

21. (Previously Presented) A communication apparatus comprising the modulation apparatus of claim 12.

22. (Currently Amended) A modulation method comprising:
modulating a frequency converted signal by a first baseband phase signal, and generating a modulated signal;
determining finding a first phase distortion between a phase of the modulated signal and a phase of a reference signal;
generating an oscillation frequency as a modulated output signal, the oscillation frequency being determined by a control signal indicating the first phase distortion;
converting a frequency of the modulated output signal generated, and generating the frequency converted signal;
demodulating the modulated output signal generated and generating a second baseband phase signal; and

storing a constant; and

determining finding a second phase distortion by multiplying a magnitude of a phase change between adjacent data obtained from a subsequent first baseband phase signal that follows the first baseband phase signal, by the stored constant, compensating the subsequent first baseband phase signal using the determined second phase distortion, and outputting the compensated subsequent first baseband phase signal, wherein: performing a subtraction between the first baseband phase signal and the second baseband phase signal, finding a constant by dividing the second phase distortion by one of a magnitude of a first frequency change and a magnitude of a phase change between adjacent data, each magnitude being found based on the first baseband phase signal, finding a third phase distortion by multiplying the constant and the magnitude of the phase change between the adjacent data, and compensating the third phase distortion with respect to the first baseband phase signal

the constant is determined by dividing a third phase distortion by one of a magnitude of a frequency change per unit time of the first baseband phase signal and a magnitude of a phase change between adjacent data of the first baseband phase signal; and

the third phase distortion is a difference between the first baseband phase signal and the second baseband phase signal.